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Program Preferences

This section describes how the proposal assists in meeting the Proposition 84 IRWM Program Preferences as outlined in Section II.F of the Guidelines. Note that all seven projects, as a whole, address the following Program Preference:

- Effectively integrate water management programs and projects within a hydrologic region identified in the California Water Plan; the Regional Water Quality Control Board (RWQCB) region or subdivision; or other region or sub-region specifically identified by DWR

The seven projects within this proposal are all within the Salinas Valley, a sub-region of the Central Coast hydrologic region. All of the projects overlie the Salinas Valley Groundwater Basin and are located within the Salinas River Watershed (or the Bolsa Nueva Watershed, in the very northern reach of the region). Several of the projects are located in a particularly degraded part of the Salinas River Watershed, the lower watershed area (known as the Gabilan or Reclamation Ditch Watershed). The water quality and ecosystem benefits that will result from each of these projects will provide added value and benefit for the watershed system as a whole, contributing to the region's long-term plans to restore ecosystem functioning and improve water quality in that portion of the planning region. In addition, each of the seven projects will directly or indirectly provide water quality and/or water supply benefit for the Salinas Valley Groundwater Basin. The accumulated effects of these projects will have significant and positive impact on the groundwater basin, and will help address the RWMG's goal of improving water supply reliability for the region.

In summary, the projects address the following Program Preferences listed in PRC §75026.(b) and CWC §10544:

Program Preference	Projects that Address Program Preference
Effectively integrate water management programs and projects within a hydrologic region identified in the California Water Plan; the RWQCB region or subdivision; or other region specifically identified by DWR	▪ All projects, as noted above
Include regional projects or programs	▪ Castroville Community Services District ▪ Elkhorn Slough Foundation ▪ Monterey Bay National Marine Sanctuary ▪ UC Davis Granite Canyon Lab
Address critical water supply or water quality needs of disadvantaged communities within the region	▪ Castroville Community Services District ▪ San Jerardo Co-operative
Effectively integrate water management with land use planning	▪ Elkhorn Slough Foundation
For eligible SWFM funding, projects which: … b) provide multiple benefits, including, water quality improvements, ecosystem benefits, reduction of instream erosion and sedimentation, and groundwater recharge.	▪ Elkhorn Slough Foundation
Address Statewide priorities:	
Drought Preparedness	▪ San Jerardo Co-operative ▪ City of Soledad ▪ Monterey Bay National Marine Sanctuary
Use and Reuse Water More Efficiently	▪ San Jerardo Co-operative ▪ City of Soledad

	▪ Castroville Community Services District ▪ Central Coast Wetlands Group
Climate Change Response Actions	▪ San Jerardo Co-operative ▪ Elkhorn Slough Foundation
Expand Environmental Stewardship	▪ Elkhorn Slough Foundation ▪ Monterey Bay National Marine Sanctuary ▪ UC Davis Granite Canyon Lab ▪ Central Coast Wetlands Group
Practice Integrated Flood Management	▪ Elkhorn Slough Foundation ▪ Central Coast Wetlands Group
Protect Surface Water and Groundwater Quality	▪ San Jerardo Co-operative ▪ Castroville Community Services District ▪ Central Coast Wetlands Group ▪ Elkhorn Slough Foundation ▪ Monterey Bay National Marine Sanctuary ▪ UC Davis Granite Canyon Lab
Ensure Equitable Distribution of Benefits	▪ San Jerardo Co-operative ▪ Castroville Community Services District ▪ Central Coast Wetlands Group ▪ Elkhorn Slough Foundation ▪ Monterey Bay National Marine Sanctuary

The Program Preferences addressed by each of the projects contained in this proposal are described in more detail below.

Project 1: Soledad Water Recycling/Reclamation Project

Implementing Agency: City of Soledad

1. **Address Statewide Priorities:** The project addresses the following Statewide Priorities:
   a. **Drought Preparedness**
   b. **Use and Reuse Water More Efficiently**

By recycling water and making it available for irrigation, limited groundwater resources are reserved for potable water uses. The Salinas Valley Groundwater Basin is currently in an overdraft condition. While this project alone will not completely remedy the overdraft, initially 70 acre-ft per year of water will not have to be drawn from the basin because of the use of recycled water. This amount is expected to increase to 180 acre-ft per year as more customers switch to recycled water for non-potable needs.

Project 2: Castroville CSD Well 2B Treatment Project

Implementing Agency: Castroville Community Services District

This project meets several of the Program Preferences as described below:

1. **Include regional projects or programs.**
   - This project is included in the May 2006 Salinas Valley Integrated Regional Water Management Functionally Equivalent Plan (FEP). There are 13 stated goals in the FEP. This project addresses

two of those goals, Improve Water Supply Reliability and Protect and Improve Groundwater Quality. It improves water supply reliability for the community of Castroville, which is seeing seawater intrusion of groundwater affect the water quality at its municipal wells. The addition of a well in the 900-foot aquifer, which is not affected by seawater intrusion, will both add reliability for the District and allow reduced pumping from the intruded 180/400-foot aquifer. This supports the second goal, Improve Groundwater Quality. Monterey County Water Resources Agency, which manages the Salinas Valley Groundwater Basin, is working to reduce pumping from the 180/400-foot aquifer in the lower basin as a means of arresting or reducing the rate of seawater intrusion.

- The FEP includes 25 stated objectives. This project addresses these five of these objectives:
  - Stop seawater intrusion. As discussed above, this project will reduce well pumping in the 180/400-foot aquifer.
  - Provide sufficient water supply to meet all water needs through the year 2030. This project augments the water supply for Castroville, CA. Under the Castroville Community Plan, produced by the Monterey County Housing and Redevelopment Office, the community may add 1,655 new dwelling units over the next 20-years. Groundwater supply for this development will come from reduced agricultural pumping, which will be off-set with deliveries of recycled and surface water under the CSIP program. Additional wells within the community will be required to supply this new development as it occurs.
  - Diversify water supply sources. Castroville CSD's current wells are in the 180/400-foot aquifer. The 900-foot aquifer is not hydraulically connected to the 180/400-foot aquifer, and therefore provides a separate source of supply for Castroville that is not subject to the same risk of seawater intrusion.
  - Meet or exceed all applicable water quality regulatory standards. The purpose of this project is to provide water treatment to meet the drinking water requirements of Title 22 of the California Code of Regulations. The specific standard to be met if the Maximum Contaminant Level for Arsenic. The State and Federal standard for arsenic in drinking water is ≤0.010 mg/L. Water samples collected at the well have been between 0.017 and 0.020 mg/L.
  - Meet or exceed M&I water quality targets established by stakeholders. Castroville CSD has not specified a more restrictive water quality target than those in Title 22 of the California Code of Regulations.

2. Address critical water supply or water quality needs of disadvantaged communities within the region.

- Castroville is a Census-Designated Place (CDP), so U.S. Census data was used to determine DAC status. Recently, the U.S. Census published the results of their *2005-2009 American Community Survey*. In that survey, the MHI for Castroville was identified as $47,515, or 78.7% of the State of California MHI of $60,392 (both in 2009 dollars).

3. Address Statewide Priorities for the IRWM Grant Program.

a. Use and Reuse Water More Efficiently:

Completion of this deep well project within Castroville is more efficient than relocating a shallow well outside the District boundary, and constructing a long pipeline to connect the well to the system. While this will not affect the quantity of water produced and used, it will reduce the construction impacts and the project power requirements.

b. Protect Surface Water and Groundwater Quality:

As discussed under item 1, this project is one of several that will reduce groundwater pumping from the 180/400-foot aquifer as part of a program to reduce seawater intrusion.

*c. **Ensure Equitable Distribution of Benefits:***
As discussed above, Castroville is characterized as a DAC under the U.S. Census *2005-2009 American Community Survey* results. This project addresses a safe drinking water need for the community by providing wellhead treatment for their new water source.

Project 3: San Jerardo Wastewater Project: Water Quality Concerns in a Disadvantaged Farm-Worker Community in the Salinas Valley

Implementing Agency: San Jerardo Cooperative, Inc.

The San Jerardo Wastewater Project addresses the following Program Preferences:

1. Address critical water supply or water quality needs of disadvantaged communities within the region

This project serves the critical water quality needs of a disadvantaged community (DAC), the San Jerardo Co-operative in the Salinas Valley. San Jerardo is a rural housing complex for low-income farm-worker families on a 33-acre site in rural Monterey County, about 7.5 miles Southeast of Salinas. San Jerardo's MHI was found to be at 53.7% of the state's MHI, qualifying it as a DAC.

2. Address Statewide Priorities for the IRWM Grant Program.

*a. **Drought Preparedness:***

- Promote water conservation, reuse and recycling
- Improve landscape irrigation efficiencies
- Achieve long term reduction of water use
- Efficient groundwater basin management

First, a water conservation education program will be implemented by the end of 2011. The project also includes direct water conservation measures such as installation of water restrictor fittings and low flush toilets at designated units participating in the new water conservation grant program. This includes installation of 1.3 gallon flush toilets in designated units, the community center and the child-care facility on the premises, installation of water restrictor valves or fixtures in designated interior faucets and showers, installation of a flow meter at inflow point from wastewater collection pipe system, inspection of cleanout fittings, repairs as needed and installation of a filter unit at the community center, child-care facility and designated units.

These water conservation measures are required since the Co-op has not installed or upgraded water-restricting faucets, showerheads or low-flow toilets in the residential units, in the child-care facility, or the community room. Water conservation and recycling education programs or materials were not provided by previous drinking water system owners and no educational programs have been implemented by Monterey County to date. No formal study of the feasibility or cost benefit of water recycling or grey water diversion has been undertaken yet; however, both could have a positive impact on wastewater system efficiency and water usage.

Water conservation improvements are expected to produce immediate measurable reductions in wastewater from households projected at 20% by the end of 2012 and an additional 10% by the end of 2013 when taking into account the summer seasonal migrant Head Start program at the child-care facility located on the Co-op. Installation of the fixtures and out-flow metering at intake to the treatment ponds early in the construction process will produce measurable results prior to project completion.

b. Use and Reuse Water More Efficiently:

- Implement water use efficiency, water conservation, recycling and reuse to help meet future water demands
- Increase urban water use efficiency measures such as conservation and recycling

These preferences will be achieved as explained in Drought Preparedness above.

c. Climate Change Response Actions:

- Reduce Energy Consumption
- Use and reuse water more efficiently
- Reduce energy consumption of water systems and uses
- Use cleaner energy sources to move and treat water
- Reduce not only water demand but wastewater loads as well, and reduce energy demand
- Water use efficiency
- Water recycling
- Water system energy efficiency

The project includes installation of solar-powered surface aerators in Ponds 1 and 2 for adequate aerobic digestion of organic matter. Solar aerators will be installed as an alternative in bid documents and recommended if the cost is competitive with conventional aeration systems. The water conservation and re-use component shall include research and reporting of solar-powered technologies. We will also reduce maintenance and operating expenses through improved filtration and solar aeration by July 2012.

Furthermore, this project will provide additional air quality benefits as expansion of the system's capacity will reduce noxious odors from the overtaxed ponds.

d. Protect Surface Water and Groundwater Quality:

- Protecting and restoring groundwater quality to safeguard public and environmental health and secure water supplies for beneficial uses

One of the purposes of the San Jerardo Wastewater Project is to reduce further water contamination of the underlying aquifer, the East Side Aquifer of the Salinas Valley Groundwater Basin. Extremely high concentrations of nitrates and 1-2-3-trichloropropane in the drinking water of the community were found and determined to be a public health risk requiring intervention by the courts and Monterey County. The concentrations of these two constituents in the water indicate contamination of the underlying groundwater aquifer.

San Jerardo residents experienced health impacts from water contamination including rashes, sores and hair loss. A new source of drinking water has now been developed with combined federal, state and local resources, and community organizing and advocacy. However, the inadequate wastewater system remains a threat due to the discharge of contaminants into the Salinas Valley Groundwater Basin. Accumulated contaminants in the wastewater residue pose a continuing risk to groundwater quality. Contamination of the underlying aquifer system is a

violation of San Jerardo Co-operative's Waste Discharge Requirements Order No. R3-2003-0054, and the California Water Code. Addressing contamination from the wastewater system is thus consistent with the Regional Board's Basin Plan and will help protect and restore groundwater quality.

e. Ensure Equitable Distribution of Benefits:

- Increase the participation of small and disadvantaged communities in the IRWM process.
- Develop multi-benefit projects with consideration of affected disadvantaged communities and vulnerable populations.
- Contain projects that address safe drinking water and wastewater treatment needs of DACs.

This program preference/statewide priority is at the heart of this project. The project is entirely based in a DAC whose median household income (MHI) is at 53.7% of the state's MHI, and the Co-operative itself is the primary implementing agency.

Since early 2009, this community has been very engaged and participating in the Greater Monterey County IRWM planning process. The Co-operative is represented on the governance structure, the Regional Water Management Group (RWMG), through its Manager and life-long resident, Horacio Amezquita. The Environmental Justice Coalition for Water (EJCW) is a support organization that is also an active member on the RWMG through its program staff, Dipti Bhatnagar. The Greater Monterey County RWMG has consistently encouraged the participation of the San Jerardo Co-operative and EJCW to represent DAC needs within the IRWM Plan and the region. The RWMG has remained responsive to the special needs of a DAC such as San Jerardo, and has offered assistance and support in completing this project application.

Project 4: Integrated Ecosystem Restoration in Elkhorn Slough

Implementing Agency: Elkhorn Slough Foundation

The Integrated Ecosystem Restoration in Elkhorn Slough project meets several of the Program Preferences listed in PRC §75026.(b) and CWC §10544, as described below:

1. **Include regional projects or programs.**

   This project collaborates across watersheds, regions and counties to make water management projects more cost effective.

2. **Effectively integrate water management with land use planning**

   This project redirects excess sediment from ocean and landfill disposal where it is a waste, to wetland restoration sites where it is an asset.

3. **For eligible SWFM funding, projects which: … b) provide multiple benefits, including, but not limited to, water quality improvements, ecosystem benefits, reduction of instream erosion and sedimentation, and groundwater recharge.**

   This project provides multiple benefits, including: more cost effective flood control and harbor maintenance, improved surface water quality, and ecosystem restoration.

4. **Addresses Statewide Priorities:** The project addresses the following Statewide priorities:

   a. Climate Change Response Actions:

Adaptation to Climate Change: This project increases the resilience of tidal marsh to climate change by making it better able to keep pace with sea level rise. It also restores tidal marsh, which will capture and sequester carbon at a rate of approximately 225 tons per year.

b. Expand Environmental Stewardship: This project restores declining and rare tidal marsh habitats, provides a demonstration of agriculture and habitat restoration side by side, improves water quality, and creates economic win-win situations across watersheds, regions, and counties.

c. Practice Integrated Flood Management:

More sustainable flood and water management systems: The project makes flood management and harbor dredging more sustainable by enabling those projects to cost less and to have a lesser impact on the environment.

d. Protect Surface Water and Groundwater Quality:

Protecting and restoring surface water and groundwater quality to safeguard public and environmental health and secure water supplies for beneficial uses: This project improves surface water quality by restoring tidal marsh in an estuary impaired by eutrophication, and by establishing a native grass buffer between a working farm and the estuary.

e. Ensure Equitable Distribution of Benefits:

- Develop multi-benefit projects with consideration of affected disadvantaged communities and vulnerable populations.

This project makes flood management more sustainable on a stretch of the Pajaro River adjacent to the town of Pajaro, a disadvantaged community.

Project 5: Water Quality Enhancement of the Tembladero Slough and Coastal Access for the Community of Castroville

Implementing Agency: Central Coast Wetlands Group at Moss Landing Marine Labs

1. Address Statewide Priorities: The project addresses the following Statewide Priorities:

a. Use and Reuse Water More Efficiently:

Phase 1 of the proposed project will set the groundwork for restoration and enhancement of the Tembladero Slough. Through restoration and enhancement of the slough and its surrounding floodplain, and creation of treatment wetlands, Phase 2 of this project will increase the ability of the slough to capture, store, and treat both urban and farm stormwater runoff prior to its release into the Monterey Bay. By holding the water on the land longer, the amount of water that percolates back into the ground will increase as well, increasing groundwater supplies.

b. Expand Environmental Stewardship:

In Phase 1 of the proposed project, extensive community outreach and education will take place in Castroville and the surrounding area to involve the community in the planning process. This will increase their overall knowledge of the surrounding water system and with that will come an enhanced sense of stewardship. Phase 2 of the project through restoration and enhancement of the Tembladero Slough will improve watershed, floodplain, and instream functions.

c. Practice Integrated Flood Management:

- The project will establish restoration, public access, and water quality enhancement objectives as integral parts of future flood control management for this watershed, creating a more sustainable flood and water management system to handle urban and agricultural runoff.
- The project will identify 20 acres of land for the purchase of easements, which will be restored as treatment wetlands, flood control sites, buffer for adjacent farmland, and natural habitat in the lower section of the Gabilan Watershed. This will result in enhanced surrounding floodplain ecosystems.

d. Protect Surface Water and Groundwater Quality:

A major goal of the proposed project is to protect and restore the surface water and groundwater quality in the Lower Gabilan Watershed to safeguard public and environmental health and secure water supplies for beneficial uses. This will be achieved through the restoration and enhancement of a proposed 20 acres of wetland habitat.

e. Ensure Equitable Distribution of Benefits:

- Through extensive community outreach and education in Phase 1 of the proposed project, we will work to increase the participation of Castroville, a small and disadvantaged community, in the planning process for the wetland restoration and public access path.
- This multi-benefit project will establish restoration, public access and water quality enhancement objectives as integral parts of future flood control management for this watershed, specifically in the lower watershed, adjacent to affected disadvantaged communities and vulnerable populations in and around Castroville.

Project 6: Watershed Approach to Water Quality Solutions

Implementing Agency: Monterey Bay National Marine Sanctuary, Central Coast Wetlands Group at Moss Landing Marine Labs, and the Resource Conservation District (RCD) of Monterey County

This project will meet the following IRWM Program Preferences:

1. Include regional projects or programs.

The project represents a regional project that will implement multiple regional programs already being successfully demonstrated in other regions on the Central Coast such as Livestock and Lands, and Irrigation Nutrient Efficiency for the agriculture community. The California Rapid Assessment Method has been used around the state and is recognized by the Statewide Monitoring Council as a quick and efficient means to document and assess both wetland and riparian health.

2. Address Statewide Priorities.

The project will address several statewide priorities, including:

a. Drought preparedness:

While this is not a priority outcome for the project, the project will work to *Improve landscape and agricultural irrigation efficiencies* and *Achieve long term reduction of water use.* Growers will be encouraged to implement irrigation practices to minimize water use through drip irrigation and native plants will replace non-natives within the restoration sites requiring less uptake of water. Throughout all of the community outreach, water conservation will be promoted. The

irrigation management program for growers is estimated to reduce water usage by up to 90% for drip irrigation systems.

b. Expand Environmental Stewardship:

The proposed project will implement and successfully achieve environmental stewardship. This will occur throughout the residential and agriculture community, combining outreach through watershed festivals, on-farm demonstrations, and community involvement through weeding, planting, and monitoring. All activities will include bilingual translation.

c. Protect Surface Water and Groundwater Quality:

The project's objectives are all aimed at restoring beneficial uses for Santa Rita Creek and improving water quality in downstream tributaries. Through implementation of best management practices upstream with the agriculture community and restoration on the creek, targets for monitoring include attainment of water quality objectives for beneficial uses on Santa Rita Creek.

d. Ensure Equitable Distribution of Benefits:

This project will *Increase the participation of small and disadvantaged communities in the IRWM process.* There are neighborhoods around Santa Rita Creek that are identified as DAC, especially within the school district. Through the community outreach, we will reach the school children and their families and engage them in community events such as planting native plants, water quality monitoring, class projects, and community watershed festivals.

Project 7: Evaluation of Potential for Stormwater Toxicity Reduction by LID Treatment Systems

Implementing Agency: UC Davis Granite Canyon Marine Pollution Studies Laboratory

The proposed project will meet the following IRWM Program Preferences:

1. Include regional projects or programs.

The project is consistent with the *Salinas River Watershed Action Plan* (Central Coast Regional Water Quality Control Board, 1999), which encourages programs to reduce non-point source pollution in this watershed. The project is located in the City of Salinas where local watersheds are impaired due to numerous contaminants. The project is located in two sub-watersheds (Carr Lake and Markeley Swamp) that feed into the City of Salinas Reclamation Ditch. This channel conveys stormwater from urban and agriculture lands to the Monterey Bay National Marine Sanctuary via Moss Landing Harbor and the Elkhorn Slough. The Reclamation Ditch, Moss Landing Harbor, and the Elkhorn Slough are all included on the Central Coast Regional Water Quality Control Board 303(d) list of impaired water bodies due to water and sediment toxicity, pesticides, sedimentation, nitrates, and turbidity.

There is a watershed-wide Total Maximum Daily Load (TMDL) reduction program for this area. Management practices to achieve prescribed load reductions are being implemented in urban and agriculture lands. This project complements the watershed-wide TMDL program (RWQCB 2008) by providing information on the relative loading of specific constituents of concern listed in the sub-watershed TMDLs. For example, contaminant loading information from this project could be used to differentiate between relative levels of loadings from residential and commercial vs. agriculture

sources in regional stormwater, and can determine whether management practices recently required in regional urban LID projects are sufficient to meet the TMDL goals.

2. Address Statewide Priorities.

The project will address several statewide priorities, including:

a. Protect Surface Water and Groundwater Quality:

To comply with recent revisions to State and Regional Water Quality Control Board NPDES permitting requirements, cities in the Central Coast region are being required to monitor stormwater quality. The City of Salinas holds the only individual municipal stormwater permit in the Central Coast Region. Stormwater monitoring at various sites in the City's watersheds have indicated persistent toxicity at some stations. The causes and sources of this toxicity are unclear, and the City's current monitoring plans are not designed to identify sources of contaminants causing toxicity. The proposed project complements the existing Salinas Stormwater Monitoring Program by providing additional information on possible sources of toxicity to subwatersheds in the City.

b. Expand Environmental Stewardship:

This project meets the environmental stewardship element of the program preferences by enhancing information on pollutant loading and sources of toxicity in Salinas River watersheds. This information will be used to differentiate sources of contaminant loading and will lead to improvement of water quality in key watersheds of the Salinas River, Elkhorn Slough, and Monterey Bay ecosystems.

c. Practice Integrated Flood Management (LID):

A key element of the regional stormwater management and pollution prevention plans requires implementation of LID practices to reduce stormwater volume and pollutant loading. Construction of bioswales in new and remodeled commercial and residential developments are a primary LID practice recommended in the Salinas Stormwater Management Plan. The proposed project meets the Integrated Flood Management element of the program preferences by providing information to promote implementation of well-designed regional LID projects. The project is designed to compare LID (i.e., bioswale) effectiveness in several urban applications by comparing contaminant load and toxicity reductions in residential and commercial developments. The commercial applications are further delineated by comparing LID load reductions in developments influenced by runoff from different types of businesses (e.g., home furnishings, home construction and nursery supplies, restaurants and mixed-use development). By comparing the effectiveness of LID practices to reduce contaminant loading and toxicity under a variety of commercial and residential settings, the project will provide important information to local, regional, and state agencies responsible for managing storm water, protecting groundwater, and improving surface water quality.